

Progress in Mathematics

Edited by:

J. Oesterlé
Département de Mathématiques
Université de Paris VI
4, Place Jussieu
75230 Paris Cedex 05, France

A. Weinstein
Department of Mathematics
University of California
Berkeley, CA 94720
U.S.A.

Progress in Mathematics is a series of books intended for professional mathematicians and scientists, encompassing all areas of pure mathematics. This distinguished series, which began in 1979, includes authored monographs and edited collections of papers on important research developments as well as expositions of particular subject areas.

We encourage preparation of manuscripts in some form of TeX for delivery in camera-ready copy which leads to rapid publication, or in electronic form for interfacing with laser printers or typesetters.

Proposals should be sent directly to the editors or to: Birkhäuser Boston, 675 Massachusetts Avenue, Cambridge, MA 02139, U. S. A.

- 1 GROSS. Quadratic Forms in Infinite-Dimensional Vector Spaces
- 2 PHAM. Singularités des Systèmes Différentiels de Gauss-Manin
- 3 OKONEK/SCHNEIDER/SPINDLER. Vector Bundles on Complex Projective Spaces
- 4 AUPETIT. Complex Approximation, Proceedings, Quebec, Canada, July 3-8, 1978
- 5 HELGASON. The Radon Transform
- 6 LION/VERGNE. The Weil Representation, Maslov Index and Theta Series
- 7 HIRSCHOWITZ. Vector Bundles and Differential Equations Proceedings. Nice, France, June 12-17, 1979
- 8 GUCKENHEIMER/MOSER/NEWHOUSE. Dynamical Systems, C.I.M.E. Lectures. Bressanone, Italy, June, 1978
- 9 SPRINGER. Linear Algebraic Groups
- 10 KATOK. Ergodic Theory and Dynamical Systems I
- 11 BALSEV. 18th Scandinavian Conferess of Mathematicians, Aarhus, Denmark, 1980
- 12 BERTIN. Séminaire de Théorie des Nombres, Paris 1979-80
- 13 HELGASON. Topics in Harmonic Analysis on Homogeneous Spaces
- 14 HANO/MARIMOTO/MURAKAMI/OKAMOTO/OZEKI. Manifolds and Lie Groups: Papers in Honor of Yozo Matsushima
- 15 VOGAN. Representations of Real Reductive Lie Groups
- 16 GRIFFITHS/MORGAN. Rational Homotopy Theory and Differential Forms
- 17 VOVSÍ. Triangular Products of Group Representations and Their Applications
- 18 FRESNEL/VAN DER PUT. Géométrie Analytique Rigide et Applications
- 19 ODA. Periods of Hilbert Modular Surfaces
- 20 STEVENS. Arithmetic on Modular Curves

- 21 KATOK. Ergodic Theory and Dynamical Systems II
- 22 BERTIN. Séminaire de Théorie des Nombres, Paris 1980-81
- 23 WEIL. Adeles and Algebraic Groups
- 24 LE BARZ/HERVIER. Enumerative Geometry and Classical Algebraic Geometry
- 25 GRIFFITHS. Exterior Differential Systems and the Calculus of Variations
- 26 KOBLITZ. Number Theory Related to Fermat's Last Theorem
- 27 BROCKETT/MILLMAN/SUSSMAN. Differential Geometric Control Theory
- 28 MUMFORD. Tata Lectures on Theta I
- 29 FRIEDMAN/MORRISON. Birational Geometry of Degenerations
- 30 YANO/KON. CR Submanifolds of Kaehlerian and Sasakian Manifolds
- 31 BERTRAND/WALDSCHMIDT. Approximations Diophantiennes et Nombres Transcendants
- 32 BOOKS/GRAY/REINHART. Differential Geometry
- 33 ZUILY. Uniqueness and Non-Uniqueness in the Cauchy Problem
- 34 KASHIWARA. Systems of Micro-differential Equations
- 35 ARTIN/TATE. Arithmetic and Geometry: Papers Dedicated to I. R. Shafarevich on the Occasion of His Sixtieth Birthday. Vol. 1
- 36 ARTIN/TATE. Arithmetic and Geometry: Papers Dedicated to I. R. Shafarevich on the Occasion of His Sixtieth Birthday. Vol. II
- 37 DE MONVEL. Mathématique et Physique
- 38 BERTIN. Séminaire de Théorie des Nombres, Paris 1981-82
- 39 UENO. Classification of Algebraic and Analytic Manifolds
- 40 TROMBI. Representation Theory of Reductive Groups
- 41 STANLEY. Combinatorics and Commutative Algebra
- 42 JOUANOLOU. Théorèmes de Bertini et Applications
- 43 MUMFORD. Tata Lectures on Theta II
- 44 KAC. Infinite Dimensional Lie Algebras
- 45 BISMUT. Large deviations and the Malliavin Calculus
- 46 SATAKE/MORITA. Automorphic Forms of Several Variables, Tani-guchi Symposium, Katata, 1983
- 47 TATE. Les Conjectures de Stark sur les Fonctions L d'Artin en $s = 0$
- 48 FRÖLICH. Classgroups and Hermitian Modules
- 49 SCHLICHTKRULL. Hyperfunctions and Harmonic Analysis on Symmetric Spaces
- 50 BOREL ET AL. Intersection Cohomology
- 51 BERTIN/GOLDSTEIN. Séminaire de Théorie des Nombres, Paris 1982-83
- 52 GASQUI/GOLDSCHMIDT. Déformations Infinitésimales des Structures Conformes Plates
- 53 LAURENT. Théorie de la Deuxième Microlocalisation dans le Domaine Complexe
- 54 VERDIER/LE POTIER. Module des Fibres Stables sur les Courbes Algébriques: Notes de l'Ecole Normale Supérieure, Printemps, 1983
- 55 EICHLER/ZAGIER. The Theory of Jacobi Forms
- 56 SHIFFMAN/SOMMESE. Vanishing Theorems on Complex Manifolds
- 57 RIESEL. Prime Numbers and Computer Methods for Factorization
- 58 HELFFER/NOURRIGAT. Hypo-ellipticité Maximale pour des Opérateurs Polynômes de Champs de Vecteurs
- 59 GOLDSTEIN. Séminaire de Théorie des Nombres, Paris 1983-84
- 60 PROCESI. Geometry Today: Giornate Di Geometria, Roma. 1984

- 61 BALLMANN/GROMOV/SCHROEDER. Manifolds of Nonpositive Curvature
- 62 GUILLOU/MARIN. A la Recherche de la Topologie Perdue
- 63 GOLDSTEIN. Séminaire de Théorie des Nombres, Paris 1984–85
- 64 MYUNG. Malcev-Admissible Algebras
- 65 GRUBB. Functional Calculus of Pseudo-Differential Boundary Problems
- 66 CASSOU-NOGUES/TAYLOR. Elliptic Functions and Rings and Integers
- 67 HOWE. Discrete Groups in Geometry and Analysis: Papers in Honor of G.D. Mostow on His Sixtieth Birthday
- 68 ROBERT. Autour de L'Approximation Semi-Classique
- 69 FARAUT/HARZALLAH. Deux Cours d'Analyse Harmonique
- 70 ADOLPHSON/CONREY/GHOSH/YAGER. Analytic Number Theory and Diophantine Problems: Proceedings of a Conference at Oklahoma State University
- 71 GOLDSTEIN. Séminaire de Théorie des Nombres, Paris 1985–86
- 72 VAISMAN. Symplectic Geometry and Secondary Characteristic Classes
- 73 MOLINO. Riemannian Foliations
- 74 HENKIN/LEITERER. Andreotti-Grauert Theory by Integral Formulas
- 75 GOLDSTEIN. Séminaire de Théorie des Nombres, Paris 1986–87
- 76 COSSEC/DOLGACHEV. Enriques Surfaces I
- 77 REYSSAT. Quelques Aspects des Surfaces de Riemann
- 78 BORHO/BRYLINSKI/MACPHERSON. Nilpotent Orbits, Primitive Ideals, and Characteristic Classes
- 79 MCKENZIE/VALERIOTE. The Structure of Decidable Locally Finite Varieties
- 80 KRAFT/PETRIE/SCHWARZ. Topological Methods in Algebraic Transformation Groups
- 81 GOLDSTEIN. Séminaire de Théorie des Nombres, Paris 1987–88
- 82 DUFLO/PEDERSEN/VERGNE. The Orbit Method in Representation Theory: Proceedings of a Conference held in Copenhagen, August to September 1988
- 83 GHYS/DE LA HARPE. Sur les Groupes Hyperboliques d'après Mikhael Gromov
- 84 ARAKI/KADISON. Mappings of Operator Algebras: Proceedings of the Japan-U.S. Joint Seminar, University of Pennsylvania, Philadelphia, Pennsylvania, 1988
- 85 BERNDT/DIAMOND/HALBERSTAM/HILDEBRAND. Analytic Number Theory: Proceedings of a Conference in Honor of Paul T. Bateman
- 86 CARTIER/ILLUSIE/KATZ/LAUMON/MANIN/RIBET. The Grothendieck Festschrift: A Collection of Articles Written in Honor of the 60th Birthday of Alexander Grothendieck. Vol. I
- 87 CARTIER/ILLUSIE/KATZ/LAUMON/MANIN/RIBET. The Grothendieck Festschrift: A Collection of Articles Written in Honor of the 60th Birthday of Alexander Grothendieck. Volume II
- 88 CARTIER/ILLUSIE/KATZ/LAUMON/MANIN/RIBET. The Grothendieck Festschrift: A Collection of Articles Written in Honor of the 60th Birthday of Alexander Grothendieck. Volume III
- 89 VAN DER GEER/OORT/STEENBRINK. Arithmetic Algebraic Geometry
- 90 SRINIVAS. Algebraic K-Theory
- 91 GOLDSTEIN. Séminaire de Théorie des Nombres, Paris 1988–89
- 92 CONNES/DUFLO/JOSEPH/RENTSCHLER. Operator Algebras, Unitary Representations, Enveloping Algebras, and Invariant Theory. A Collection of Articles in Honor of the 65th Birthday of Jacques Dixmier

- 93 AUDIN. The Topology of Torus Actions on Symplectic Manifolds
- 94 MORA/TRAVERSO (eds.) Effective Methods in Algebraic Geometry
- 95 MICHLER/RINGEL (eds.) Representation Theory of Finite Groups and Finite Dimensional Algebras
- 96 MALGRANGE. Equations Différentielles à Coefficients Polynomiaux
- 97 MUMFORD/NORI/NORMAN. Tata Lectures on Theta III
- 98 GOBILLON. Feuilletages, Etudes géométriques
- 99 DONATO /DUVAL/ELHADAD/TUYNMAN. Symplectic Geometry and Mathematical Physics. A Collection of Articles in Honor of J.-M. Souriau
- 100 TAYLOR. Pseudodifferential Operators and Nonlinear PDE
- 101 BARKER/SALLY. Harmonic Analysis on Reductive Groups
- 102 DAVID. Séminaire de Théorie des Nombres, Paris 1989-90
- 103 ANGER /PORTENIER. Radon Integrals
- 104 ADAMS /BARBASCH/VOGAN. The Langlands Classification and Irreducible Characters for Real Reductive Groups
- 105 TIRAO/WALLACH. New Developments in Lie Theory and Their Applications
- 106 BUSER. Geometry and Spectra of Compact Riemann Surfaces
- 108 BRYLINSKI. Loop Spaces, Characteristic Classes and Geometric Quantization
- 108 DAVID. Séminaire de Théorie des Nombres, Paris 1990-91
- 109 EYSSETTE/GALLIGO. Computational Algebraic Geometry.